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ABSTRACT

This workshop began with a questionnaire that asked participants: how often in a normal week their students use a textbook; their thoughts on the average percentage of use of the textbook in North American classrooms; what a student would be likely to reply if asked whether a particular statement in the textbook was true; how a text is chosen for use; and their opinions concerning the use of textbooks to teach critical thinking. Both students and teachers should critically examine textbooks to find their particular worldviews and answers to questions about: (1) who and what was included or omitted; (2) how the book came to be published; (3) author qualifications; (4) content and biases; (5) visuals and their importance to the book; (6) empirical/factual validity; (7) treatment of concepts; (8) value statements; (9) cause and effect statements; and (10) generalizations. Textbook publishers consider some of these questions, as well as the amount of space to be devoted to each topic, book size, print size, readability, diversity in curriculum in different jurisdictions, and other considerations insisted on by Ministries/Departments of Education. The procedure is complex, often controversial, and highly political. The result is a textbook which reflects what is considered worth knowing by those with decision-making power. (MAH)

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ED 399 880

CRITICALLY THINKING ABOUT THE TEXTBOOK.

A Presentation to the 16th International Conference on Critical Thinking.

Sonoma State University,

July 28-31, 1996.

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Abstract.

This is a workshop and thus is presented as such. The activities provided are meant to be performed by workshop participants and interaction between participants and the workshop leader is expected to enhance the learning experience. The format of the workshop consists of:

1. Individual participant response to a questionnaire and discussion of those responses by the whole group.
2. A brief introduction on the use of textbooks in schools and some of the research findings about social studies textbooks.
3. Then, depending on the number of participants in the workshop, a number of activities concerned with critically thinking about the textbook as a cultural artifact are carried out in groups.
4. Debriefing.
5. Depending on the time available and the number of participants, a number of activities concerned with critically thinking about the information provided in the textbook are carried out in groups.
6. Debriefing.

The text used in the workshop was Beers, B. *Patterns of Civilization* Volume I. Englewood Cliffs, NJ.: Prentice Hall. 1984. This is the prescribed text for Social Studies 8 in the Province of British Columbia, Canada.

A Definition of Critical Thinking

HE029516

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Critical thinking has to do with arriving at reasoned judgments about what it would be sensible or reasonable to believe or do in a given situation. As such it involves having the necessary intellectual resources. These include having certain concepts - assumption, induction, etc.; being able to apply certain heuristics - using inquiry procedures, using a library, asking an expert, etc.; having the background knowledge necessary to tackle a question which involves critical thinking; and having standards with which to judge the products of ones thinking - plausibility, accuracy, clarity, adequate evidence to support a claim, avoidance of fallacious reasoning, and so on. Critical thinking involves creative thinking as it often requires imagining possible implications, creating novel solutions, or reframing questions in new ways. It is involved in problem-solving, issue resolution, moral reasoning and decision making. It is contextual in the sense that the need for critical thinking always arises in particular situations and the situation determines what qualifies as a reasonable response. However, this does not imply that standards are not universally applicable. It is intimately related to knowledge in that to know X requires that one has good reasons for believing that X is the case.

THE WORKSHOP.

Part One.

All participants are asked to complete the following questionnaire.

1. About how often in a normal week, do your students use a textbook?

2. What do you think is the average percentage of use of the textbook (this includes student reading it and answering questions about the content, or using it as the basis for research projects or reading it for homework purposes) in classrooms in North America?

3. It is often the case that the textbook is the curriculum.

Strongly agree. Agree. No opinion. Disagree. Strongly disagree.

4. If you asked a student whether a particular statement in the textbook was true, the student is likely to reply_____.

5. How was the textbook chosen that you use?

6. It is difficult to use textbooks to teach critical thinking because textbooks do not supply the depth of information required in order to think critically.

Strongly agree. Agree. No opinion. Disagree. Strongly disagree.

Responses to the questionnaire are shared and discussed. Some of the evidence for answers to some of the questions are presented in the introductory remarks.

Part Two.

Introductory remarks.
By textbook I mean that book which is the major source of content knowledge for a course, which all students have access to or must purchase, is generally speaking authorized, approved or recommended by some one in authority - school board, government, and which, de facto is often the curriculum.
1. The text as ubiquitous - find them in just about every classroom.
2. The text as the curriculum. Either the text was customized for the curriculum or the curriculum was customized for the existing text. Teachers report they don't read the curriculum guide, they look at the Table of Contents of the textbook and base their course on its contents.
3. Like a curriculum, texts portray particular world views. They include knowledge that is been chosen for student learning out of the vast array of knowledge that could be learned. Because they receive official sanction, they represent what is deemed to be legitimate knowledge.
3. Although it is impossible to get accurate data on the use of the text, it is estimated that about 80% of instructional time at the secondary school level in academic courses is devoted in one way or another to the use of the text. At one time students would read in sequence from the textbook or copy out passages for memorization. In a study of all senior High School teachers of social studies in B.C. it was found that the preferred method of instruction was the textbook (Cassidy, W. and Bognar, C. *More than a good idea: Moving from words to action in social studies*. Victoria, B.C.: Ministry of Education, 1991). Even grade 4 and 7 teachers stated that it was their second preferred method of teaching after the use of full class discussions (and I think this was interpreted by teachers as the teacher imparting information with a few student directed questions included). This was in spite of the fact that in the same study, students thought that use of the textbook was the least interesting method of learning, even though they acknowledged that the textbook was very important.

4. The textbook is regarded as truth by students. if questioned about the truth of claims in texts, student reaction is likely to be, "Well, it wasn't true, why put it in the text? As one Canadian writer put it, "They never make mistakes... because God wrote them: or if he didn't, he most certainly knew the authors." (Lorne H, Clio in the Classroom. *Books in Canada*.. March 1980, p.21). In a study carried out by Wineberg at the University of Washington, professional historians and high achieving history secondary students evaluated different sources of information on the same topic (Wineburg, S. On the reading of historical texts: Notes on the breach between school and academy. *American Educational Research Journal*, 28)3), 1991, 459-519). Students rated the textbook evidence as the most accurate, historians as the least. As reported by the author, "for students, the locus of authority was the text." As another author put it about how students react to texts, "it is as if their authors did not exist at all, as if they were simply the instruments of a heavenly intelligence transcribing official truths." (Wineburg, quoting Schrag)

5. Textbooks have been analyzed for racism, sexism, ageism, handicapism, religious content, controversial content, images of history, geography, other countries, famous people etc. etc. Some were done from a neo-Marxist perspective, showing that textbooks replicated the existing social order, and legitimated knowledge of the elite groups in society. In nearly all cases texts have been found wanting in whatever they were analyzed for whether quantitative or qualitative methods were used. Each of these studies contributes to the critical discourse on textbooks and have contributed to this workshop.

Part Three.
Critical analysis of the textbook as a cultural artifact.

Participants analyze the textbook as a cultural artifact - that is what does the text say about what counts as legitimate knowledge; who and what is included and who and what is omitted; how did the textbook come to be published? The questions posed to participants could be asked of students immediately they receive the textbook or they could be incorporated in later lessons. This critical analysis will help students see that the text contains a particular worldview, and that there are other ways of viewing the world. Although the questions and activities listed below are meant to get students (and teachers) to critically examine the textbook as a cultural artifact, many of them are also germane to critically thinking about the claims made in the textbook. Thus, the two categories are not mutually exclusive.

A. The author.

General Question.

- **What is his/her background and qualifications?**

Specific Questions.

- **What criteria would you apply to judge the authority of the author?**
- **Does this author measure up to your criteria?**

RELIABILITY OF TEXTBOOK AUTHORS.

Modified from Ennis, R. *Logic in Teaching* (Englewood Cliffs, N.J: Prentice Hall, 1969.) p.393.

He/she has a good reputation.

The subject matter of the textbook is in her/his field of expertise.

She/he was disinterested - that is even though he/she was likely to profit from the book, this did not influence what she/he believed to be true.

Her/his reputation could be affected by the content of the textbook and he/she was aware of this fact.

He/ she has followed accepted procedures in arriving at the conclusions presented in the textbook.

B. The content of the textbook.

General Question.

- **What is the content of the textbook?**

Specific Questions.

- **Given the topic of the book, what content *could* be included?**
- **What in your view would be worth knowing about this topic?**
- **What content is excluded?**
- **What places, people, issues, ideas, events are given prominence? How much space is devoted to each?**

- **How are women, children, the aged, the challenged, the rich, the poor, minorities, people with particular occupations, people of colour, etc, dealt with?**
- **What sorts of biases are present?**
- **What are the key words in the index? What biases do they reflect?**

Questions and activities related to the analysis of *Patterns of Civilization*.

What percentage of the book is devoted to:
North America?
South America?
Europe?
Africa?
Australasia?
Asia?

How many males are listed in the index? What is their claim to fame? Who receives the most references?
How many females are listed in the index? What is their claim to fame? Who receives the most references?

Analyze the glossary for the number of references to
Economic concepts
Political concepts
Religious concepts.
Other?
What inferences can you make from this?

In the Chronology of World History, what events are given prominence? Do you think the categories of Government and Society, Science and Technology, The Arts and Literature, and Religion and Philosophy are useful and inclusive categories?

C. Visuals.

General Question.

- **What visuals are included?**

Specific Questions.

- **Who is depicted (age, sex, ethnicity)? What are they doing? What does this say about the status of the people and the activities depicted?**
- **What evidence is there of stereotyping? of bias?**
- **What sorts of graphs, charts and tables are included? What do they show? What importance is attached to them?**
- **Do the visuals distort the data in any ways? If so, how?**

Questions and activities based on the analysis of *Patterns of Civilization*.

Count the number of visuals. Of these, how many are pictures. Of these, how many show people?
How many show males only? Who are they? What are they doing?
How many show females only? Who are they? What are they doing?
How many show children only? Who are they? What are they doing?
How many are of both males and females? Who are they? What are they doing? What relationships are shown between males and females?
How many are of adults and children? Who are they? What are they doing?
Of the above, how many of the visuals depict non-Caucasians?
Are there visuals of people with physical or mental challenges?
Given the topic of the book, what visuals of people would you consider to be important to include?

What is the subject matter of the visuals which do not depict people? What do these tell you about what is considered important? Given the topic of the book, what visuals would you consider to be important?

Analyze the other visuals.
What do they show? What do they tell readers about what is important?
Are the data distorted in any way?
How accurate are the data shown?
Given the topic of the book, what data would you consider to be important to show?

Critical Analysis of the information contained in the textbook.

D. Empirical (factual) statements.

General Question.

- **Is there evidence presented for the statements made in the textbook?**

Specific Questions.

- **If there is evidence for the statements made, how is that evidence presented e.g. ..... according to (a source)....there is evidence that.....?**
- **If there is no evidence presented, how would you go about determining the believability of the statements made?**

Questions and activities related to critical examination of *Patterns of Civilization.*

Locate at least one major event/person/idea/place in the textbook. Look at the statements made and identify whether there is any evidence presented to support their believability.
If no evidence is presented, how would you go about determining the believability of the claims made? Would the believability differ according to who was telling the story/presenting the evidence? If so, how so? If the stories/evidence was likely to differ, is there any way we could determine "truth?"
If there is more than one story and the textbook presents only one of them, how would you go about presenting the other story(ies)? In what situations would it be really important to do this? Why?
Here is an extract from the text (p. 99). Analyze the reasoning. What might you infer from the passage? Would the inference be valid?

Between 1870 and 1914, the lot of industrial workers improved dramatically. Wages rose significantly. In Britain and France, wages nearly doubled in the last half of the 1800s, and workers could buy twice as much as they could before. In addition, thanks to more efficient methods of production, goods such as clothing were often cheaper than before.

As in the above example, the support for claims may be in the form of an argument. There would be a conclusion and premises supporting it either in a deductive or inductive form.

Deductive: Here the conclusion follows logically from the premises:
All capital cities in the world are situated on rivers.
Paris is a capital.
Therefore Paris is situated on a river.

Given the first two premises, the conclusion has to be accepted - it is a *valid* argument.
However, it is not a *sound* argument, because the first premise is false.

Inductive: Here, the conclusion is accepted because of the weight of the supporting premises.
Most capital cities in the world are situated on rivers.
Paris is, London is, Ottawa is, ...

On assessing arguments, one should be on the lookout for fallacious reasoning - slippery slope, appeal to tradition, hasty generalization, etc. Many critical thinking textbooks list these.
For ascertaining if an argument is strong, the following worksheet can be used (Agnew P. The critical thinking worksheet. *CT News* 5, no. 4 (1987): 1, 6-8.).

A Critical Thinking Worksheet.

A. Argument
True False Uncertain
1. Between 1870 and 1914, the lot of the worker improved dramatically.

B. Problems - ambiguous language; use of emotive tone, fallacies
C. Strength of argument
Very Strong Strong Good Fair
Weak Very Weak
D. Counter arguments
E. Responses to counter arguments
F. Summary:
Strongly agree with conclusion
Agree with some qualifications
No judgement (need more information)
Disagree with some qualifications
Strongly disagree

Many of the claims made in textbooks are based on observations. Here, the following principles can be used (see Norris, S. Defining observational competence. *Science Education*, 1984, 68(2), 129-142.)

An observation statement tends to be credible to the extent that the observer is:
alert to the situation and has given a statement careful consideration,
has no conflict of interest,
is skilled at observing the sort of thing observed,
has a theoretical understanding of the thing observed,
has senses that function normally,
has a reputation for being honest and correct,
uses as precise a technique as is appropriate,
is skilled at the technique used,
has no preconceived notion about the way the observation will turnout ,
was not exposed, after the event, to further information relevant to describing it.
An observation statement tends to be credible to the extent that the observation conditions:
provide a satisfactory medium of observation,
provide sufficient time for observation,

E. Concepts.

General Question.

- **What are the key concepts that a student would have to grasp in order to understand the information presented?**

Specific Questions.

- **Are these concepts defined?**
- **Are the definitions adequate?**

Questions and activities related to conceptual analysis related to *Patterns of Civilization*. (Adapted from Coombs. J. Problems of Meaning. In I. Wright and C. Labar (Eds.) . Critical Thinking and Social Studies. Toronto: Grolier 1987.

Understanding the meaning of a term.

> A. Understanding the attributes/characteristics which gives X its meaning, or to put it another way, the rules for defining X. This understanding is always based on understanding other concepts.
>
> Example. MAP --- a representation, usually on a flat

Constructing cases.

A good case should meet two criteria:

1. It must unambiguously identify or describe all the features relevant to one's being able to use the term to characterize it.

2. It must characterize the case in such a way as to make clear how the term applies to it.

Testing hypotheses about the meaning of a term.

Hypothesis 1. That a certain feature (N) must be present if the term is to apply (N is a necessary condition).

To test the hypothesis -- construct a case which is similar to a case the term is known to characterize except that it lacks feature N.

Hypothesis 2. That the term applies whenever certain conditions or set of conditions (S) obtains (S are sufficient conditions).

To test the hypothesis -- construct a case which fulfills condition S but cannot be characterized by the term.

Hypothesis 3. That a certain feature (T) is typically present in cases to which the term applies (T is a characteristic condition).

To test the hypothesis -- look at all cases of which one is sure that the term applies and see if they all contain T.

Examples. Ethnocentrism.

Which of these cases are good ones?

Suppose you went to Australia and saw Aborigines eating bugs and worms. You say," They are uncivilized because they enjoy these foods."

Suppose you saw a totem pole carved by the Haida. You say, "

The carvings on the pole are junk because they don't look like what they are supposed to be."

Suppose you saw a totem pole carved by the Haida. You say. " These carvings are junk because they are not carved in a way a person from Europe would carve them."

F. Value Statements.

General Question.

- **What value statements are presented?**

Specific Questions.

- **Are these value statements justified? If so, how?**
- **Are the justifications adequate?**
- **What implicit value statements are there?**

Activities and questions related to *Patterns of Civilization*..

Locate a value statement - this is a statement concerning good/bad (Lincoln was a good president); this is better/worse (a democracy is better than a dictatorship); this should/not be done (The North should have been more aggressive at the beginning of the Civil War).
Is there any argument made to support the value statement? Do you consider the argument to be a good one? If it is not a good one, or if there is no argument, what would constitute such an argument?
What people, events etc. are evaluated positively? What is negatively evaluated? Do you agree with these evaluations? Why or why not?
What people, events, etc. are treated in the book in non-judgmental ways which you would consider to be in need of evaluation? How would you go about evaluating these people, events, etc.? What would count as a justifiable evaluation ? In this regard, there are principles which can be used to test the conclusion.

Principle Testing.

Principle tests are used to determine the acceptability of the value standards used by oneself or others. Although these tests cannot prove that one standard is more acceptable than another, they can, if used honestly, make one more confident that the principles one uses are defensible.
Role Exchange Test.

The point of this test is to put yourself in the shoes of the person *most adversely* affected by the action under consideration.
1. Imagine what it would be like in the situation of the other person and imagine what the consequences of the action would have for that person.
"How would the other person feel?"
"What would be the consequences for the other person?"
2. Consider whether or not it would be right for the other person to take the action if you were the one experiencing the consequences.
"Would it be right for me to perform the action if I was the other person/"
3. Decide whether or not to accept the conclusion because of the consequences to the other person.

The Universal Consequences Test.
The point of this test is to imagine and the assess the consequences if everyone who was likely to carry out a particular action, actually did so.
1. Imagine what the consequences would be if everyone who is likely to want to perform the same action for the same reasons were to do so.
"What if everyone in similar circumstances performed the action/"
"What would the consequences if everyone performed the action for the same reasons/"
2. Consider whether or not the imagined consequences would be acceptable.
" Are the consequences acceptable?"
3. If the consequences are acceptable conclude that the action is acceptable.
4. If the consequences are not acceptable conclude that the action is not acceptable or find a new reason to support you action and test the new reason.

The New Cases Test.
The point of this test is to assess whether an action in question is consistent with other actions which logically fall under the same value standard.
1. Choose a new case which is relevant and which you think might be difficult to apply to your decision.
2. Consider whether or not you would be willing to judge this case in the same way as you judged the action in your original decision.
3. If you do judge the case in the same way and you think it is the hardest case you can imagine then accept the decision. If you can think of harder cases, go back to step 2.
4. If you cannot accept your original decision either reject your decision, or find a new reason for accepting it.

G. Controversial topics.

General Question.

- **Are controversial topics dealt with?**

Specific Questions.

- **How are controversial topics dealt with?**
- **Are there topics in the textbook which you would regard as controversial, but which the text treats as non-controversial?**

Questions and activities related to *Patterns of Civilization*.

1. Is the controversy mentioned? If not, why do you think it is not raised?
2. What sort of controversy is it? Is it a matter of dispute about evidence? about the meaning of terms? about value issues (moral, political, economic, aesthetic, prudential?)
3. Are opposing points of view identified? Are all the differing viewpoints mentioned? If not, which viewpoints receive attention? Why?
4. How is the controversy dealt with? Is it merely stated that there are opposing points of view or does the author of the text take a position? If so what is that position? On what is it based? Are there questions posed to the student? If so, what are these? Are they appropriate? Would the student be helped to resolve the controversy if the questions were answered?

F. Cause and Effect.

General Question.

- **What cause and effect statements are presented in the text?**

Specific Questions.

- **Is evidence presented for the statements?**
- **Are the statements justified?**

Questions and activities related to *Patterns of Civilization*.

Here is an extract from the text *Patterns of Civilization*.(p. 99). Analyze the reasoning. What causes and effects might you infer from the passage? Would the inferences be valid?

Between 1870 and 1914, the lot of industrial workers improved dramatically. Wages rose significantly. In Britain and France, wages

nearly doubled in the last half of the 1800s, and workers could buy twice as much as they could before. In addition, thanks to more efficient methods of production, goods such as clothing were often cheaper than before.

Choose one event about which you are familiar. Review the text and analyze the cause and effect reasoning. Is the reasoning sound?

Has the fallacy of post hoc, ergo propter hoc (after this, therefore because of this) been committed? Just because one event precedes another, does not necessarily mean that the event caused the other. In the above extract, just because wages doubled does not mean that people could buy twice as much unless prices stayed stable. And if clothing and other unnamed items were cheaper, then could not workers buy more than twice as much if prices stayed stable.

G. Generalizations.

General Question.

- **What generalization statements are presented in the textbook?**

Specific Questions.

- **Are these generalizations warranted?**
- **How could you test the 'truth' of the generalization?**

Questions and activities related to *Patterns of Civilization*

What sorts of generalization statements are there -universal (all As are Bs), prevalence (most As are Bs), probabilistic(this poll is accurate within 2 percent, 19 times out of twenty), or enumerative which summarize data that have actually been counted(all the people in the room are females)? What is the evidence to support the generalization? Are there enough instances to justify the generalization? Does the generalization fit into a larger body of knowledge which is believable?
Have any fallacies been committed - hasty generalization (just because one A is a B doesn't necessarily mean that all As are Bs), or fallacy of division (just because a group generally has a certain characteristic, doesn't mean necessarily that each individual member of the group has that characteristic e.g. The Canucks won the Stanley Cup, J. Brodeur played centre for the team, so he must be a great player)?

H. Textbook production.

This is a simplified account of how publishers go about producing a textbook and how it is adopted in Canada. similar procedures are followed in the U.S.

1. A publisher finds out what is the curriculum content in X in all relevant jurisdictions and determines through market research that there is a niche in the market for a book on X. OR an author approaches a publisher with a proposal for a textbook and the publisher determines the viability of such a proposal.
2. The publisher through contacts with the field approaches possible authors or starts to work with the author of an accepted proposal. This entails that the publisher formulates a set of criteria for the publication - the content, the amount of space devoted to each topic, the number of visuals, the number of pages, the size of the textbook, the print size, the readability level, the number of activities/questions, the number of chapters, and any other considerations that are insisted upon by Ministries/Departments of Education (accounting for multicultural concerns, ESL students, etc.). This involves a great deal of negotiation and compromise as if a text is to make money it may have to take into account some diversity in curriculum in different jurisdictions.
3. The textbook is written, edited, reviewed, modified. Publishers try to meet all requirements of the jurisdictions in which it is to be used.
4. The Ministry/Department of Education initiates a selection process which could involve field testing, review by Ministry personal for "social acceptability" and curriculum fit, reviews by teachers, parents, librarians, and other stakeholders, before acceptance as a textbook for school use. In some jurisdictions, Ministries list acceptable textbooks and school boards or schools or individual teachers then make the final selection.

The procedure is complex, often controversial, and highly political. The result is a textbook which reflects what is considered to be worth knowing by those who have decision-making power.